

CLAIMS

1. A method of storing information on an information appliance comprising:
forming a string having a plurality of delimited segments, wherein each of said
5 plurality of delimited segments comprises:
a delimiter defining a known bit pattern; and
a segment containing information associated with applications that
interact with said information appliance; and,
storing said string on said information appliance.
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2. A method of storing information on an information appliance according to claim 1,
wherein each delimiter comprises the same bit pattern.
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3. A method of storing information on an information appliance according to claim 1,
wherein each delimiter comprises a unique bit pattern.
- 20 4. A method of storing information on an information appliance according to claim 1,
wherein each segment is encoded with a different encryption key using the same
encryption algorithm.
- 25 5. A method of storing information on an information appliance according to claim 1,
wherein each segment is encrypted by a unique encryption algorithm.

6. A method of storing information on an information appliance according to claim 1, wherein said segments are encrypted using a symmetric key such that the same key is used to encrypt and decrypt.

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7. A method of storing information on an information appliance according to claim 1, wherein said segments are encoded using asymmetric encryption.

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8. A method of storing information on an information appliance according to claim 1, wherein said segments are encrypted using a session key, and said session key is separately encrypted and stored on said information appliance.

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9. A method of storing information on an information appliance according to claim 1, wherein a select one of said plurality of delimited segments is removed from said string by:

reading out said string;

locating said select one of said plurality of delimited segments;

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removing said select one of said plurality of delimited segments from said string;

and,

storing said string back to said information appliance.

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10. A method of storing information on an information appliance according to claim 1, wherein a new segment is added to said string by:

accessing said new segment;

concatenating a new delimiter to said new segment to define a new delimited segment;

reading said string;
joining said new delimited segment to said string; and,
storing said string back to said information appliance.

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11. A method of storing information on an information appliance comprising:
forming a string having a plurality of delimited segments, wherein each of said
plurality of delimited segments comprises:

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a delimiter defining a known bit pattern; and

a segment containing information associated with applications that

interact with said information appliance; and,

encrypting said string; and,

storing said string on said information appliance.

12. A method of accessing information stored on an information appliance comprising:
accessing a string stored on said information appliance, said string comprising a
plurality of delimited segments, each of said plurality of delimited segments having a
delimiter and a segment, wherein each segment represents a unique information
context;

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identifying a predetermined delimiter associated with a predetermined segment;

detecting said predetermined delimiter within said string, said

predetermined delimiter indicating the location within said string of said predetermined
segment; and,

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reading said predetermined segment.

13. A method of accessing information stored on an information appliance according to
claim 12, wherein each delimiter comprises the same pattern of bits, and further

comprising:

knowing prior to detecting, the relative position of said predetermined delimiter within said string; wherein said first predetermined delimiter is detected by reading sequentially through said string and detecting delimiters until said
5 predetermined delimiter is located.

14. A method of accessing information stored on an information appliance according to claim 13, wherein said predetermined segment is read by:

10 determining the length of said predetermined segment; and,
reading said string by an amount based upon the determined length of said predetermined segment.

15. A method of accessing information stored on an information appliance according to claim 13, wherein said predetermined segment is read by:

reading a first portion of said string adjacent to said predetermined delimiter, said first portion comprising information concerning the length of said predetermined segment; and,
20 reading said string by an amount based upon the length of said predetermined segment read from said first portion.

16. A method of accessing information stored on an information appliance according to
25 claim 13, wherein said predetermined segment is replaced back into said string at the same relative position from which said predetermined segment was read.

17. A method of accessing information stored on an information appliance according to claim 12, wherein:

each delimiter comprises a unique pattern of bits; and,
said predetermined delimiter is detected utilizing random access.

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18. A method of accessing information stored on an information appliance according to claim 17, wherein said predetermined segment is replaced back into said string such that the sequence of said plurality of delimited segments after replacing said
predetermined segment is different from the sequence of said plurality of delimited
segments prior to removing said predetermined segment.

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19. A method of accessing information stored on an information appliance according to claim 12, wherein said string is encrypted while stored on said information appliance such that each of said plurality of delimited segments are unintelligible, and further comprising decrypting said string such that said predetermined segment is decrypted and the remainder of said plurality of delimited segments remain unintelligible.

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20. A method of accessing information stored on an information appliance according to claim 12, wherein:

said string is encrypted using a private key such that each segment of said plurality of delimited segments is stored on said information appliance as unintelligible information, and each segment can be decrypted using an associated public key, and further comprising:

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decrypting said string using a select public key associated with said predetermined segment such that said predetermined segment is decrypted and the remainder of said plurality of delimited segments remain unintelligible.

21. A method of accessing information stored on an information appliance according to claim 12, wherein said predetermined segment is deleted from said information
5 appliance by:

reading out said string entirely;

removing said predetermined delimiter and said predetermined segment from
said string;

saving said string back to said information appliance.

22. A method of accessing information stored on an information appliance comprising:
selecting a predetermined delimiter, said predetermined delimiter identifying the
location of a predetermined segment in a string stored on said information appliance,
said string comprising a plurality of delimited segments;

locating said predetermined delimiter within said string;

extracting from said string, a first data portion, said first data portion comprising
the length of said predetermined segment; and,

reading said predetermined segment from said string.

23. A method of accessing information stored on an information appliance according to
claim 22, further comprising:

removing said predetermined segment, said first data portion, and said
25 predetermined delimiter, from said string;

processing said predetermined segment;

determining a new length of said predetermined segment after being processed,
and storing said new length in said first data portion;

reuniting said predetermined delimiter, said first data portion, and said

predetermined segment with said string; and,
storing said string on said information appliance.

5 24. A method of accessing information stored on an information appliance according to claim 22, wherein said predetermined delimiter, said first data portion, and said predetermined segment are reunited with said string in the same relative positions from which were read.

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25. A method of accessing information stored on an information appliance according to claim 22, wherein said predetermined delimiter, said first data portion, and said predetermined segment are reunited with said string by being appended to the end of said string.

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26. A method of accessing information stored on an information appliance comprising:
selecting a predetermined delimiter, said predetermined delimiter identifying the location of a predetermined segment in a string stored on said information appliance,
said string comprising a plurality of delimited segments;

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locating said predetermined delimiter within said string;
extracting from said string, a first data portion, said first data portion
removing said predetermined segment, said first data portion, and said predetermined delimiter, from said string;

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rejoining said string such that said string comprises said plurality of delimited segments except for said predetermined segment, said first data portion, and said predetermined delimiter;
saving said string back to said information appliance;
processing said predetermined segment;

determining a new length of said predetermined segment after being processed,
and storing said new length in said first data portion;

reuniting said predetermined delimiter, said first data portion, and said
predetermined segment with said string; and,

5 storing said string on said information appliance.

27. An information appliance comprising:

a string stored therein, said string comprising a plurality of delimited segments,
each of said plurality of delimited segment comprising:

a delimiter comprised of a pattern of bits; and,

a segment comprising information or data unique to a predetermined
application or function and wherein each of said plurality of segments is
delimited by a segment identifier.

28. An information appliance according to claim 27, wherein each delimiter is unique.

29. An information appliance according to claim 27, wherein each delimiter is identical.

30. An information appliance according to claim 27, wherein each of said plurality of
delimited segments further comprises a first data portion, said first data portion
containing the length of the associated segment.

31. An information appliance according to claim 22, wherein at least one of said plurality of delimited segments contains biometric information sufficient to enable said information appliance to determine the identity of a user.

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32. An information appliance according to claim 31, wherein said information appliance further comprises a program arranged to compare said biometric information against identification information entered by said user to verify the identity of said user.

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33. An information appliance according to claim 32, wherein said information appliance is arranged to couple to a distributed productivity environment if the identity of said user is properly verified such that said user is logged into said distributed productivity environment anonymously.

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34. An information appliance according to claim 27, wherein said string comprises an encrypted string stored on said information appliance such that a predetermined segment must be decrypted prior to use.

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35. An information appliance according to claim 27, further comprising:
a first application arranged to read said string and modify the contents of said string by editing the contents of a select one of said plurality of delimited segments,
25 removing a select one of said plurality of delimited segments from said string, or adding a new delimited segment to said plurality of delimited segments, wherein said string is written back to said information appliance after the contents are modified.

36. A method of providing authentication and identification across distributed productivity environments comprising:

coupling at least one information appliance to a network;
storing within said information appliance, personal information sufficient to
5 determine the identity of a user of said information appliance;
obtaining identification information from said user;
comparing said identification information provided by said user against said
personal information stored within said information appliance;
allowing access to said distributed productivity environment if said personal
10 information matches said identification information; and,
restricting access to said distributed productivity environment if said personal
information does not match said identification information.

37. A method of providing authentication and identification across distributed
productivity environments according to claim 36, wherein said personal information
15 comprises a passcode stored within said information appliance.

20 38. A method of providing authentication and identification across distributed
productivity environments according to claim 36, wherein said personal information
comprises biometric information, wherein said identification information is obtained from
said user utilizing a biometric reading device.

25 39. A method of providing authentication and identification across distributed
productivity environments according to claim 36, wherein said information appliance
comprises a string of delimited segments, each of said delimited segments containing

information associated with a unique application supported by said information appliance.

5 40. A method of providing authentication and identification across distributed productivity environments according to claim 36, wherein said personal information is compared to said identification information within said information appliance, such that personal information is not broadcast across said distributed productivity environment.

10 41. A method of providing authentication and identification across distributed productivity environments according to claim 40, wherein said information appliance couples said user to said distributed productivity environment anonymously when access to said distributed productivity environment is allowed.

15 42. A method of providing authentication and identification across distributed productivity environments according to claim 40, wherein said personal information is stored within said information appliance as encrypted information, and further
20 comprising decrypting said personal information prior to comparing said personal information to said identification information.